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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,314	07/09/2003	Shigeru Shoji	204126-9002	1875
1131	7590	03/22/2006	EXAMINER	
MICHAEL BEST & FRIEDRICH LLP Two Prudential Plaza 180 North Stetson Avenue, Suite 2000 CHICAGO, IL 60601			MANAHAN, TODD E	
			ART UNIT	PAPER NUMBER
			3732	

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,314

Applicant(s)

SHOJI ET AL.

Examiner

Todd E. Manahan

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-19 is/are allowed.
- 6) ☒ Claim(s) 1-13 and 20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/29/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claim 20 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 20 is directed to a nozzle whereas base claim 1 from which it depends is directed to measuring apparatus. As such, claim 20 does not meet the infringement test since one could conceivably infringe upon the nozzle of claim 20 without infringing on the apparatus of claim 1 (see MPEP 608.01(n) III). Claim 20 has not been further considered on the merits thereof.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bourdeau et al. (United States Patent No. 4,470,810) in view of Albelda et al. (United States Patent No. 5,496,172).

Bourdeau et al. disclose a tooth mobility detection device comprising and impact mechanism that applies an impact force on a tooth, a sensor 10 which detects displacement of the tooth, and a tooth mobility calculation mechanism which calculates tooth mobility of the tooth on basis of an output signal from the sensor. The impact mechanism may be operated by “any

Art Unit: 3732

mechanical, electro-mechanical or other means” (col. 5, lines 6-8). Bourdeau et al. disclose the invention essentially as claimed except for the impact mechanism including an injection port or a suction port so as to apply the force by either injection or suction. Albelda et al. discloses a dental tool for providing an impact having an air injection port which applies the impact force via piston 63. The device further includes a control mechanism for setting the pressure to a predetermined value. Therefore, because these two operating devices were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the pneumatic operating device of the impact mechanism of Albelda et al. for the electromechanical operating device of the impact mechanism of Bourdeau et al.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bourdeau et al. in view of Albelda et al. as applied to claim 1 above, and further in view of Khademazad et al.

The combination Bourdeau et al. in view of Albelda et al. discloses the claimed invention except that the sensor is a vibration sensor instead of an irradiation detector. Khademazad et al. shows that an irradiation detector is an equivalent structure known in the art. Therefore, because these two tooth movement sensors were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute an irradiation detector of Khademazad et al. for the vibration sensor of Bourdeau et al.

Allowable Subject Matter

Claims 12-19 are allowed.

Conclusion

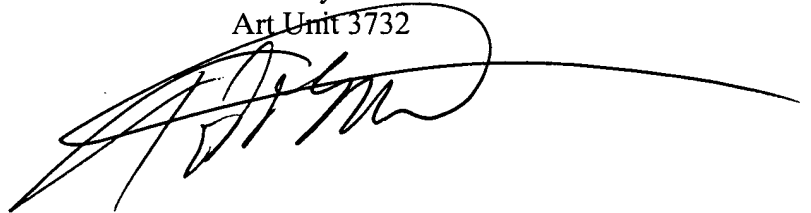
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd E. Manahan whose telephone number is 571 272- 4713. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571 273-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Todd E. Manahan
Primary Examiner
Art Unit 3732

A handwritten signature in black ink, appearing to be 'T.E. Manahan', is written over the printed name and title. The signature is stylized with a large, sweeping loop at the end.

T.E. Manahan
15 March 2006